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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,391	01/19/2001	Hiroshi Shimanuki	106145-00016	7551

7590 09/25/2003

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EXAMINER

BUSHEY, CHARLES S

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/764,391	SHIMANUKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Scott Bushey	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 6 and 9 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Species D in Paper No. 8 was acknowledged in the previous Office action and is again acknowledged herein. Accordingly, claims 5 and 7, which are drawn to non-elected species are withdrawn from further consideration. Applicant should note that instant claim 1, as amended from its original generic form is no longer generic as it reads specifically on elected Species D, as depicted by Figure 10 of the application.

### ***Claim Objections***

2. Claim 8 is objected to because of the following informalities: On the last line of claim 8, "said the flowing gas" does not make sense. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krueger et al, taken in view of applicant's admitted prior art as depicted by Figure 14 of the instant application.

Krueger et al as applied in the previous Office action substantially disclose applicant's invention as recited by instant claim 8, except for the materials worked on being a wet air stream flowing on one of the inside or outside of the hollow fibers and a dry air stream being on the other of either the inside or outside of the hollow fibers.

The admitted prior art, as depicted by instant Figure 14, teaches that it is known to exchange moisture between air streams where one of the streams flows on the inside of the hollow fibers and the other of the streams flows on the outside of the fibers. It would have been obvious for an artisan at the time of the invention, to operate Krueger et al by inputting an air stream of a first moisture content into the bypass channel of the reference so that the stream would flow on the outside of the hollow fibers, and inputting the other of the air streams having a second moisture content into the interior of the hollow fibers, in view of the admitted prior art, such that the different streams were able to exchange moisture without actually contacting one another, such allowing advantageous moisture exchange without the risk of contaminating one air stream with an unwanted component of the other air stream.

Applicant should note that the bypass channel opening nearest the bypass channel inlet end of Krueger et al provides for directly providing a portion of the inlet gas to the outside of the hollow fiber membranes in the same manner as in the instant application as depicted by applicant's Figure 10 of the elected species. Clearly applicant's flow of gas in Figure 10 that is said to directly flow outside of the hollow fiber membranes does in fact flow within the bypass channel for a short distance prior to flowing outside of the membranes.

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***Allowable Subject Matter***

6. Claims 1-4, 6, and 9 are allowed.

The prior art of record fails to disclose or suggest providing a plurality of outlet ports formed in a circumferential direction on the housing for discharging the gas that was spread across the outside of the hollow fiber membranes.

***Response to Arguments***

7. Applicant's arguments with respect to claim 8 have been considered but are not found to be persuasive. As stated in the Advisory Action mailed June 9, 2003, while claim 9 has been amended to include the plurality of circumferential housing outlet ports, claim 8 does not include such language as amended. Further, while the amendment to claim 8 to require that the outlets from the bypass channel are provided along the entire length of the bypass channel does overcome the rejection of the claim over the Nakanishi et al reference, Krueger et al as evidenced by the rejection statement above, and show by the Figure of the reference clearly depicts a bypass channel that is apertured along its entire length.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is (703) 308-3581. The examiner can normally be reached on Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on (703) 308-1261. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Scott Bushey  
Primary Examiner  
Art Unit 1724

csb  
9/17/03

  
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